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Measurement of Hugoniot on Zr-based metallic glass TSUTOMU MASHIMO, HIROAKI TOGO, YUYANG ZHANG, YUSUKE UEMURA, YOSHIHITO KAWAMURA, Kumamoto University, MASHIMO LABORATORY TEAM
— Metallic glass is a newly developed material, which has high-performance properties, such as high strength, high corrosion resistance, soft magnetism, etc. The yielding behavior of metallic glass under shock compression is a fascinating and up-to-date problem, because it has no dislocation. The Hugoniot-measurement experiments were performed on the Zr-based metallic glass by means of the inclined-mirror photographic technique and VISAR combined with a powder gun to determine the Hugoniot-elastic limit (HEL) and examine the phase transition. The Hugoniot result showed the stable high HEL stress, and also indicated a phase transition.

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